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KNOWLEDGE

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OFFICIAL SAFETY MAGAZINE OF THE U.S. ARMY

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ARMY-STRONG



U.S. ARMY COMBAT READINESS SAFETY CENTER
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KNOWLEDGE

OFFICIAL SAFETY MAGAZINE OF THE U.S. ARMY

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BURNIN' UP THE TRACK



U.S. ARMY KNOWLEDGE EVALUATION/SAFETY CENTER

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We welcome your feedback. Please e-mail comments to knowledge@crc.army.mil.

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ENTERING 'BAND O

We all hear about the positive impact engaged leadership at all echelons makes toward protecting our Soldiers, Civilians and Families and decreasing accidental loss. But who provides that leadership? Who are the Leaders in our Army responsible for taking accountability for safety? Your answer is "me."

Every member of our Army team is a Leader. Each person makes a difference in preventing accidents, engaging in safety practices both on and off duty, and mentoring and bridging the gaps in knowledge

for others by sharing their experiences. But the key to success in decreasing accident losses remains "engagement" – each one of you stepping up, engaging and sharing from the lowest level to the top.

“**ENGAGEMENT** means **YOUR** personal involvement – **STEPPING IN** wherever and whenever the **SITUATION** calls for it.”

G THE OF BROTHERS”

Engagement means your personal involvement – stepping in wherever and whenever the situation calls for it. It can be as simple as just asking the right question at the right time. For instance, seeing your Family member head out the door to ride a motorcycle without all the proper protective equipment – “Don’t you need all your PPE?” Or watching your buddies put together a spur-of-the-moment road trip – “Have you thought this through? Which one of you is taking responsibility for ensuring a safe ride back for all of you?” How many times have you heard someone, upon learning of a tragic accident, say out loud, “I knew something like that

was going to happen. Why didn’t somebody do something?” You are that somebody and you can do something!

That’s how an individual Leader makes a difference. But why make such a commitment? Think that is a “no-brainer” question, as well? Our Army codified our commitment to the team through the Soldier’s Creed. As you well know, within the Creed are four very powerful sentences which are further described as the “Warrior Ethos.” The last line of the “Warrior Ethos” states, “I will never leave a fallen comrade.” But when is a comrade fallen? Obviously, we have fallen comrades on the mountains above the Shahi-Kot Valley and

in the streets of Fallujah. But don’t we also have fallen comrades in the bars of Itaewon, in our own formations and even inside their own homes? Aren’t these comrades also worthy of our engagement?

So, we remain committed to our comrades by engaging and remaining engaged at every level required. Only together can we reduce accidental losses to their lowest levels yet. This year, we are on our way to achieving that goal. This is the result of each one of you stepping up every day and actively honoring your sworn commitment to your comrades.

By exercising ownership of our Army, we enter into

a culture that strives to continuously reduce our accidental losses to levels never before achieved, where we truly operate as a “Band of Brothers.”

Thank you for all you do to keep our Soldiers, Families and Civilians safe. Remain engaged and continue supporting safety transformation, changing the safety climate throughout the Army and sharing lessons learned to prevent the next loss. You make the difference. «

Army Safe is Army Strong!



William H. Forrester
Brigadier General, USA
Commanding



FROM CSM

RISK is **INHERENT** in our line of work, but can often be mitigated by **EXPERIENCE, PLANNING** and **TRAINING.**



Happy Birthday, America! For 232 years, our country has been known as the land of the free and home of the brave because of the Soldiers and servicemembers who have sacrificed to defend her against all enemies – foreign and domestic. At this very moment, that sacrifice continues. We at the U.S. Army Combat Readiness/Safety Center commend every one of you on your tireless dedication to duty. A lot has changed in the 233 years since our Army was established. Our Army has served the greatest nation in the world. Change and transformation is nothing new to the Army, but how we train to meet an evolving threat may be the Army's greatest challenge to date. Whether in or out of country, on or off duty, the greatest enemy to our safety is risk. Risk is inherent in our line of work, but can often be mitigated by experience, planning and training. Below are three ways we can tackle everyday risks that can affect our safety:

- The fielding of the Mine Resistant Ambush Protected (MRAP) vehicle was designed to meet an evolving threat. Training has been developed to meet the user's needs immediately, providing 40 hours of instruction in the same geographic location as the user. The plan provides systems at home station and VISMOS at CTC in which to train and gain valuable experience prior to the deployment. I had the opportunity to sit through this training and drive an MRAP during a recent visit to Operation Enduring Freedom. It is a tremendous improvement over the M1114s we drove on my two previous rotations to Operation Iraqi Freedom. Unfortunately, there are two ghosts still haunting us from the M1114 days that we have yet to overcome: Soldiers

assigned at the last minute and Soldiers not wearing seat belts. There is nothing that can substitute training and experience before a deployment. The myth about being better off not wearing seat belts when riding in a vehicle outside the wire couldn't be further from the truth. If you truly believe this misconception, train as you fight. Put on your gear and take a spin in the HEAT trainer without your seat belt. You'll suffer at least two blows – one produced by the initial accident and another when you're thrown about the inside of the trainer. Hopefully, you won't be knocked unconscious because you still have to remove yourself from the M1114. Bottom line, wear your seat belt.

- Driving a privately owned vehicle (POV) is the single most dangerous event we engage in on a daily basis. Many installations have enacted driving centers of excellence to educate drivers and better prepare them for what may lie ahead. Nearly 80 percent of all active duty sedan accidents are committed by drivers under the age of 25. Through the use of classroom instruction, simulators and several other tools, we are gaining the initiative in military and civilian driving. Recently, the Army and Navy combined their efforts to develop and field a motorcycle sportbike course. This course was designed to better prepare the rider for the challenges of riding a sportbike. Riders over the age of 25 represent nearly 70 percent of all active duty motorcycle accidents, and a large majority of those accidents occur on sportbikes. I believe most of these POV accidents are a result of bad habits learned while driving in theater. Slow down or you may not make it to your destination. Lastly,

that five-star safety rating on your vehicle means nothing if you don't use the safety equipment, so buckle up!

- Communicating effectively is probably one of the least understood leadership skills in our Army. I'm not just talking verbal and nonverbal communications that involve active listening skills and two-way conversations. I'm talking about knowing your Soldiers and the effective use of Information Operations to defeat or neutralize a threat. For example, somewhere there is a group of Soldiers waiting to be released. They'll likely get the traditional "if you drink, don't drive, if you have sex, wear a condom" brief. Yet, in theater, we plan and rehearse a two-click movement for hours. Both have inherent risks and need to be planned for accordingly. Good risk mitigation starts by effectively communicating the how, what, where, when and why of the threat you're about to face. We have made great strides in theater and have effectively transformed to an evolving threat, yet we have seen a steady increase in automobile accidents and fatalities.

Soldiering is a noble profession and each of you can be proud of your service to our great nation. Take the time during this Independence Day to reflect on what you have accomplished. While doing so, continue to prepare and train for the evolving threats that you will face – on and off duty.◀

Todd L. Glidewell

Todd L. Glidewell
Command Sergeant Major
U.S. Army Combat Readiness/Safety Center

RIDING FOR THEIR LIVES

A gentle breeze ran through the open hangar doors on each end of Fort Rucker's Yano Hall, cooling the motorcycle riders waiting inside.

Occasionally, the deep-throated roar of motorcycle engines filled the building as a pair of riders moved their machines forward toward one of the inspection stations. As others waited, a giant screen on their left played a video provided by the U.S. Army Combat Readiness/Safety Center (USACRC). Chief Warrant Officer 3 Darrin Swan, safety officer for the 1st Battalion, 145th Aviation Regiment, called it "eye candy" — something to keep the riders occupied as they waited their turn. Images danced across the screen as motorcycles tumbled end-over-end, shedding parts and dumping riders like rag dolls onto the road. Like silent movies, the pictures said it all. But, then, that was the purpose for showing the clips — to make it self-evident why thinking before twisting the throttle matters.

Glancing at the long line of motorcycles awaiting quarterly inspection, Swan talked about the problems the battalion experienced in the past. During fiscal 2007, they had one Soldier die and 13 others injured in

motorcycle accidents. Those numbers got the attention of Lt. Col. Allan Pepin, who became the 1-145th's commander in June 2007. He'd been given responsibility for the Army's largest battalion — some 2,400 strong. His battalion's turnover was intense each quarter as new students signed in and others graduated. Knowing Soldiers pay attention to those things their commanders take seriously, he created the full-time safety position held by Swan. Pepin understood being an "engaged Leader" didn't mean talking the problem to death; it meant investing the resources to do something about it.

Pepin searched through his companies, looking for a Soldier with a safety background. The mission was too important to be done as an additional duty or by someone trying to learn as they went. In Swan, he found the type of Soldier he was looking for. "He was an instructor — he understood some of the students' off-duty behavioral tendencies," Pepin said. He added Swan could be

out there with the students, seeing the things he, as a commander, might not catch.

"Although my safety officer is borrowed military manpower that impacts the company I pulled him from, the return investment to all the units and Soldiers is worth it," Pepin said. "Darrin Swan has made a significant difference because he has a passion and commitment to making positive life and occupational attitude changes in Soldiers' lives."

For Swan, this is a full-time mission. He estimates there may be as many as 500 riders in the battalion. The more than 300 motorcycles

parked in the lot waiting to enter Yano Hall was not a new sight to him; he'd seen motorcycles packing the battalion's parking lots. The fact so many were lined up for the safety inspection that afternoon was, for him, encouraging. And he has reason to be encouraged by the downturn in this fiscal year's accident trends. So far, only three battalion riders have had accidents, with the worst injury being a broken wrist. He believes the reduction in accidents signals the battalion's Soldiers are getting the message about exercising better judgment on the road.

BOB VAN ELSBERG
U.S. Army Combat Readiness/Safety Center
Fort Rucker, Ala.



“Whatever **WE CAN DO** as Leaders that **HELPS** keep that right-front pew **FROM BEING FILLED** and emergency rooms empty — **THEN THAT IS SUCCESS.**”



“We’re getting the point across about safety,” Swan said. “They [the Soldiers] know the chain of command is watching, and we know that they know we are watching and care. The benefit, we think, is that they now actually ‘want’ to do the right thing.”

That “want,” he believes, reflects the beginning of a vital cultural change toward safety. Convinced only engaged Leaders can transform the Army into a safer organization, he reflected the thoughts of Brig. Gen. Bill Forrester, director of Army safety and USACRC commanding general, as expressed in his article “What About Your ‘3 to 6?’” in the March 2008 *Knowledge*.

Pepin believes engaged leadership must trickle down from the battalion’s leadership to the Soldiers who train the students. An example of that is Chief Warrant Officer 2 Jason Ayala of Company B, 1-145. In his normal duties, Ayala handles the administration of casual students waiting to attend Survival, Escape, Resistance and Evasion (SERE) training. During the inspection, however, he manned one of the inspection stations, handing

checklists to the riders and carefully observing them as they checked each other’s bikes. The checklist was based upon the Motorcycle Safety Foundation’s (MSF) T-CLOCS example, which calls for the inspection of a motorcycle’s tires, controls, lights, oil, chassis and stands. Although motorcycle safety is much different from SERE training, the mission is the same — to enable Soldiers to survive in a potentially hostile environment. And the inspection Ayala was overseeing was no “pencil-whipping” exercise. A “no-go” on the checklist meant the rider parked his bike and walked home or bummed a ride. While that might ruin some rider’s evening, the tight standards were there for a reason. The rider who broke his wrist earlier this year did so when his motorcycle blew a tire while traveling on a highway with a posted 65-mph speed limit. At such speeds, riders cannot afford equipment or mechanical failures.

Keeping the Army’s aspiring aviators safe is no easy challenge in the environment in which they live and train. Stress is a factor for students, whether they’re in warrant officer candidate school or flight

training. Beyond that, many may have not yet fully “decompressed” from a recent deployment. A rider himself, Pepin understands riding can do wonders to bleed off stress and put life back in balance. Still, he admits, some Soldiers are tempted to trigger a shot of adrenaline by twisting the throttle at the wrong place and time, potentially leading to heartbreaking results. Having looked into the eyes of grieving Family members at memorial services, he also knows all too well the tragic consequences of an individual’s poor judgment or unpreparedness.

“I personally brief every new Soldier that comes into my organization that there is one common theme whenever you go to a memorial — and it’s the right-front pew,” Pepin said. “That’s where the surviving Family members sit and grieve the loss of their Soldier. When you see the Soldier’s pictures being displayed at the memorial, it’s too late to say to the Family, ‘We wish we could have prevented this.’ Whatever we can do as Leaders that helps keep that right-front pew from being filled and emergency rooms empty — then that is success. The Leaders at the USACRC, the U.S. Army Aviation Warfighting Center and the 1st Aviation Brigade are focused on preventing

those tragedies.”

Keeping his Soldiers safe is something Pepin takes personally as a commander. He makes it a goal to speak to each of his Soldiers to highlight the following simple basics of safety consciousness:

- Soldiers are not invincible — statistics and reality prove it every day, but Soldiers are a priceless commodity.



• Age and lack of life experience places most people at a higher risk.

• Buddy teams work both on and off duty.

• Soldiers' Families pay the ultimate price for the unnecessary risks Soldiers take.

• Many Soldiers don't get a second chance to learn from their mistakes; some are killed, while others learn their lessons from the confines of a hospital bed, wheelchair or, maybe, a jail cell.

• Soldiers need to balance fun with common sense and prudence.

• Leaders must remain engaged and Soldiers must use good judgment.

• There is no fun worth killing or seriously injuring yourself or others.◀



A LITTLE TOUGH LOVE

BOB VAN ELSBERG
U.S. Army Combat Readiness/Safety Center
Fort Rucker, Ala.

Sgt. Maj. Dwight R. Altheide is all-Army right down to the bone. As top enlisted Soldier of the 1st Battalion, 145th Aviation Regiment, at Fort Rucker, Ala., he's also all-rider. Altheide first began riding dirt bikes when he was 8 years old. Now, with nearly 40 years of experience, he still loves the freedom a motorcycle brings. And during his 24 years in the Army, he has seen a lot of improvement in the way safety is emphasized for Soldiers.

"When I first came in, there was no regulation covering the wear of personal protective equipment (PPE)," he said. "You always wore a helmet and eye protection, but there was never any guidance that said you had to wear gloves, long sleeves, long pants, over-the-ankle shoes or a reflective vest. None of that was mandatory then, but now it is — much like seat belt laws."

Altheide didn't get Motorcycle Safety Foundation (MSF) training until 1986. Like many self-taught riders, he'd built up a set of riding habits — some of which weren't necessarily the best. Also, there were some skills which weren't likely to be learned through experience. For example, his MSF training taught him to avoid obstacles through "countersteering" — a technique where riders push their handlebars one way to make their bikes go the other. Although it seems contrary to common sense, Altheide said it works and is much more effective than trying to swerve to miss an object.

Altheide picked up countersteering and other survival skills from his MSF training. He stresses that his Soldiers need to practice and reinforce their MSF survival skills just as they practice their combat skills. He explained, "If you've got a high-stress situation and have to think about what to do, then it's probably going to take too long."

Being a veteran noncommissioned officer (NCO), Altheide knows how to



use the Army's version of "tough love" when he encounters a Soldier who thinks riding safety is "optional."

Altheide said, "In my career, I have taken riding privileges away from Soldiers who were not wearing their PPE." He explained he has a simple message for erring Soldiers — "You like to ride? Well, guess what, you don't get to do it for a while. So let's see how you like not riding because you didn't follow the rules and regulations."

Although getting tough with riders to get their compliance may lose him some popularity contests, he loves motorcycle riding and cares about his Soldiers. Echoing the comments of his battalion commander, Lt. Col. Allan Peppin, he wants his Soldiers to ride both safe and smart.

Altheide smiled as he watched the more than 300 motorcycles — both sportbikes and cruisers — wind their way to the inspection stations in Yano Hall. Maybe it's a bit of anticipation? The senior NCO has been riding all-terrain vehicles of late, but he's itching to buy a new bike. After all, riding is in his blood. Just like those of his Soldiers who ride, he knows once you have ridden, the passion never leaves.

"It's the freedom — it's something 'American,'" Altheide said. "It harkens back to the freedom of riding a horse like a cowboy. You're out there in the environment. You're part of what's around you. There is nothing else like it."◀

BEST PRACTICES SAVES LIVES

CHIEF WARRANT OFFICER 3 MARCELO ASSUMPCAQ
U.S. Army Combat Readiness/Safety Center
Fort Rucker, Ala.

Best safety practices give Army units and their Leaders the knowledge and insight needed to mitigate risk, save lives and preserve combat power. What could Army units do with best safety practices? They could certainly target how they do business to improve their overall safety climate in the full spectrum of their operations. Below are a few of the best practices applied by units in the field that have proven effective in strengthening combat power, as well as ensuring the safety of Soldiers.

Commitment to Safety Practices Prevents Accidents

When safety procedures are incorporated into maintenance operations, it reduces the number of injuries and promotes an accident-free environment. Because the maintenance Leaders of the 5th Squadron, 7th Cavalry, 3rd Infantry Division, were engaged, their vehicle maintenance section experienced zero accidents during Operation Iraqi Freedom (OIF). The maintenance officer stated, "We're not doing anything unique or special, just enforcing

the rules that have always been here. So far, no one has gotten injured or hurt. The basics we all know about apply here, too, and are enforced every day."

Consistent enforcement of the standards is the key to accident prevention. Here are a few procedures that were enforced in this unit's maintenance facility:

- Proper lifting of heavy objects (using the legs, not the back, and the buddy system)
- Proper storage of

oxygen, acetylene and compressed gases

- Use of personal protective equipment such as gloves, goggles, chock blocks, jack stands, etc.

- Removal of watches, rings and other jewelry

- Good housekeeping (keeping areas clean and organized to reduce tripping hazards)

- Removal of all ammunition from vehicles

that will be worked on in the motor pool

- Prohibition of horseplay and enforcement of a no-smoking policy in the maintenance area

“CONSISTENT enforcement of the **STANDARD** ACCIDENT PREVENTION

S LIVES

Leader Engagement + Safety Awareness = Lives Saved

A safety-focused organization is destined for success, and that's the reason why the ground maintenance section of the 626th Brigade Support Battalion, 101st Airborne Division, didn't experience a single accident during its recent OIF rotation. The battalion's overwhelming success is attributed to Leader engagement and safety awareness among all Soldiers. A few of the unit's successes include:

- 870 Soldiers deployed and 870 redeployed
- All scheduled and unscheduled maintenance conducted without injuries

- 572,000 accident-free miles (334 combat logistics patrols conducted)

- Survived 12 direct blasts with no casualties
- Found 37 improvised explosive devices and captured nine insurgents

Here are some of the factors that led to this unit's success:

- Leaders were present during pre-combat inspections and pre-combat checks to ensure mission rehearsals were conducted thoroughly.
- Leaders placed high emphasis on driver training, rollover drills and enforcement of a 35-mph maximum tactical speed.
- Leaders spearheaded the concept of developing and installing up-armored equipment in 700 vehicles.
- Leaders promoted an attitude that everyone is a warrior and encouraged Soldiers to take ownership of their environment by applying composite

risk management (CRM) concepts.

- Leaders shifted schedules based on conditions and threat analysis.

According to the command sergeant major of this organization, "When units go back and they've utilized this information, that equates to a Soldier not paying for something with his life."

Risk Mitigation Enhances Readiness and Saves Lives

As the Army fields Mine Resistant Ambush Protected (MRAP) vehicles in theater, some unique challenges may arise. Hands and finger injuries continue to be a problem. The key to preventing these types of injuries and ensuring a fleet of MRAP vehicles is always in a high state of readiness is by

integrating CRM and being proactive in risk mitigation.

Maintenance Leaders of the 10th Brigade Support Battalion, 10th Mountain Division, have incorporated CRM classes into their MRAP familiarization program. They credit the success they're experiencing in saving lives and reducing injuries to their diligence in constantly reevaluating the hazards and mitigating the risks associated with their new fleet.

Conclusion

Best practices such as those mentioned above are efficient and effective, allowing units to achieve a desired outcome with fewer complications. Incorporating best practices into a unit's operations will help keep our Soldiers Army Safe and Army Strong! <<



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EVENTION. ”



BEST PRACTICES GAINING GROUND IN GROUND SUPPORT OPERATIONS

LT COL. ANDREW D. DOEHRING
7th Squadron, 8th Cavalry Regiment
Conroe, Texas

Those of us within the Army aviation community believe we are pretty good at composite risk management and mitigating risk factors to accomplish missions. After all, we are taught to fill out a risk assessment worksheet from day one and have multiple mechanisms in place to ensure we check and double-check every aspect of conducting flight operations.

GND PORT

One of the first things I did upon assuming command of the 7th Squadron, 6th Cavalry Regiment, was to sit down with my squadron safety officer and conduct an assessment on all facets of unit safety. As anticipated, the aviation side of the house was in proper order and only required a little tweaking to accomplish my safety vision and philosophy. As we began to examine the ground support side of our operations, I discovered a discrepancy in the level of emphasis that I needed to focus on immediately.

“If you take **EIGHT SOLDIERS** and a **NONCOMMISSIONED OFFICER** who have **NEVER WORKED** together, how do you get them on the **SAME LEVEL** of **UNDERSTANDING** for the **OPERATION?**”

As I began to compare the aviation and ground operation safety programs, I discovered the biggest difference was the lack of tools and guides available to the Soldiers not directly involved with aircraft operations. As pilots, we have risk assessment worksheets, a local area flying guide/rules, aircraft Dash 10 checklists, crew mission briefs, passenger briefs, air mission commander briefs, performance planning cards and much more. Aviation is an inherently dangerous business, so we have all these tools in place to help mitigate the risk factors. Once again, we do it well since it is embedded in our aviation culture. When I looked into the

tools and guides available to our unit ground support personnel, I only found a few. These included the risk management worksheet for ground vehicle operation, unit ground/tactical standing operating procedures (GSOP/TACSOP), Dash 10 operator's manuals and, when required, a convoy brief. To a young private, these resources pale in comparison to the resources available to the aviator.

I decided I needed to develop something applicable, understandable and functional to cover the majority of what we do during ground support

operations. We ended up developing the 7/6 Cav Daily Operations Brief. I modeled this document after the crew mission brief used before every flight. The objective of this new document was to capture as many of the critical areas a Soldier should be aware of before executing any mission, from motor maintenance to aircraft refueling. It had to be easy to understand and relevant to the mission or task at hand. The final product was agreed upon by my Leaders and safety personnel and implemented before our departure for annual training in August 2006.

We divided the daily operations brief into four primary categories of emphasis, each with varying numbers of

7/6 Cav Daily Operations Brief (15 May 2007)

■Pre-Mission/Combat Checks

1. Logbook review, PMCS complete, deficiencies noted.
2. Equipment requirements (vehicles, ammo, weapons, etc.)
3. Personal protective equipment (PPE) to include uniform.
4. Flight management log, update/review current status.

■Normal Operations

1. Describe mission.
2. Route (SP, RP, CP, PA).
3. Duration, expected time of completion.
4. Support available.
5. Weather.
6. Leader, group, individual responsibilities.
7. Communication: Positive, two-way verbal or visual indication of understanding.
8. Hazards.
9. (NINVD) Use of supplemental lighting.


■Troop Coordination

1. Work responsibilities.
2. Two challenge rule for all safety-related issues.
3. Cause operations authority.

■Emergency Procedures

1. Actions of troops.
2. Fire - immediate action steps.
3. Rally point and head count.
4. Emergency/survival equipment.

BE SAFE TODAY!



subareas. The four categories are pre-mission/combat checks, normal operations, troop (Soldier) coordination and emergency procedures. The focus was to get our Soldiers into the habit of using this tool before any given operation, no matter how large or small. Throughout the development process, we kept coming back to the same question. If you take eight Soldiers and a noncommissioned officer who have never worked together, how do you get them on the same level of understanding for the operation? This overarching question led us to the subareas that are included within the brief.

After nearly two years of use, I know it has helped our Soldiers develop a smarter and safer operational environment. We print it as a laminated, pocket-size card (3 inches by 3.5 inches), making it easy to carry and accessible. I issue one to every new Soldier during the quarterly newcomer's in-brief and then again to everyone before any major training event like annual training, gunnery and field exercises, etc. It has been a very useful tool for my unit and has helped place a little more emphasis on our ground support personnel when it comes to safe operations. Our safety motto is "Be Safe Today." I truly believe we are doing that. <<



SAFE DONE RIGHT

1ST LT. MICAH JACOBSON
2nd Battalion, 77th Field Artillery Regiment
Fort Hood, Texas

With safety-related accidents continuing to cause numerous casualties and loss of readiness across the Army, the techniques of the Steel Warriors, 2nd Battalion, 77th Field Artillery (FA) Regiment of the 4th Brigade Combat Team, 4th Infantry Division (4ID), at Fort Hood, Texas, are worth sharing with every unit. The 2-77 FA created a system of safety standards and procedures which helped keep safety-related accidents to a minimum both in garrison and at the National Training Center (NTC). Hopefully, these same procedures will help them achieve similar results during their deployment in support of Operation Iraqi Freedom.



NTV



The policies created by the 2-77 FA helped the battalion receive the 4ID Safety Streamer. The 4ID awards the Safety Streamer, one of the hardest honors to earn in the division, to units that successfully complete a quarter without experiencing a safety-related incident. This includes everything from on-post vehicle accidents or traffic tickets to more serious incidents such as driving under the influence arrests and personnel injuries. The 2-77 FA is the first unit to receive the award since its inception. The policies followed in garrison paid dividends during the battalion's recent rotation at the NTC, as the Soldiers maintained a safety mindset and had very few safety incidents.

Backbone of Safety

The backbone of the program is the battalion's in-processing standards, which set the tone for safety. On their day of arrival at the 2-77 FA, Soldiers receive counseling from the battery/company commander and first sergeant regarding the safety standards in the battalion and the expectations for that Soldier. The Soldier also signs an "I know" contract, which basically states the Soldier knows and understands the policies of the battalion.

From the very beginning, every Soldier in the battalion – including commanders – is assigned a battle buddy by the chain of command. Battle buddies are held accountable for each other's actions and must have a contact number and know the plans of one another before every

weekend. They must also update each other if their plans change. The battle buddy system is a simple way to ensure Soldiers are accountable to at least one other person throughout the weekend and that they have someone to turn to should they find themselves in trouble.

To reinforce expectations for each Soldier in the battalion, the 2-77 FA also conducts a safety training event each quarter for every new Soldier, as well as Soldiers involved in any safety-related incidents during the previous quarter. Known as the Steel Warrior University, the event is a day-long class which covers numerous safety topics from privately owned vehicle (POV) and privately owned motorcycle (POM) safety to alcohol and drug abuse.

Incentives

The Steel Warriors use several motivational techniques to reinforce the in-processing standards and create an atmosphere of excitement concerning safety. Battalion standard safety awards consist of a safety day off for those batteries/companies that don't have any significant incidents within a fiscal quarter. Units that have no significant incidents during a calendar month can receive a safety half-day off or a day off from physical training.

In addition to unit





awards, the 2-77 FA employs motivational icons. For example, we have a large piece of asphalt named "Reality Road," which every motorcyclist must sign their name next to, indicating they understand the higher risks of riding a motorcycle. Reality Road is just one way of implanting a visual icon within the minds of Soldiers and helps bring the consequences of a motorcycle crash into perspective.

Another influential technique is "PFC Gleep," a heavy weight that goes with the battalion on every run. The burden of carrying

PFC Gleep is insignificant compared to the burden carried by Leaders who fail to adequately train, coach and mentor their subordinates, resulting in the loss of a Soldier. The weight passes from Leader to Leader as the battalion runs, reminding them of the heavy responsibility of leadership. The 2-77 FA hands out a PFC Gleep award to the top sergeant first class or above who demonstrates leadership that exceeds the standard in preparing a Soldier for combat.

The 2-77 FA also constantly looks for new

ideas that might help decrease the number of safety-related incidents. One example is the tattoo challenge. The battalion commander spoke to the battalion a couple weeks before block leave and offered to buy a tattoo for every Soldier who wanted one if the entire battalion made it through leave without a single incident. The battalion came very close, but had a small incident a few days before the end of leave.

Composite Risk Management

An important part

“HOPEFULLY,
will help them **A**
RESULTS during
support of Oper

of the safety program is the emphasis placed on the composite risk management (CRM) process. The battalion produces a weekly risk assessment covering the general risks the battalion most likely will encounter. The safety officer briefs the assessment at the weekly training meeting and posts it at the staff duty desk. The batteries/companies then produce a more specific weekly risk assessment for their activities, which they brief and post.

In addition to the weekly risk assessments, the 2-77 FA has a vehicle risk assessment, which each truck commander (TC) completes before a vehicle movement. The TC then updates the risk assessment as conditions change. The initial risk assessment for the vehicle movement is part of the dispatch process.

For any training event which requires vehicle movement or the firing of rounds, the officer in charge (OIC) of the event produces a risk assessment specific to the types of hazards associated with the event. The OIC briefs the risk assessment to the battery/company commander and battalion commander before the event and then to all participants on the day of the event.

these same **PROCEDURES** **ACHIEVE SIMILAR** ing their **DEPLOYMENT** in ration Iraqi Freedom.”

The Steel Warriors produced a tactical risk assessment worksheet that lists the everyday risks at the platoon level associated with combat missions, such as weather and vehicle breakdowns. On the back page, the worksheet is blank to allow the platoon leader to fill in mission-specific risks. The worksheet allows the platoon leader to develop a very comprehensive risk assessment in significantly less time.

To further mitigate risks, Soldiers going on leave or pass and traveling via POV must complete the U.S. Army Combat Readiness/Safety Center's online risk assessment tool known as the Travel Risk Planning System (TRIIPS). The TRIIPS assessment must then be signed by the Soldier's commanding officer or supervisor and added to the Soldier's leave or pass packet.

Safety Engagements

Another small, but important, part of the Steel Warrior safety program is safety classes. Many of these classes are online courses such as the Composite Risk Management (Basic) Course, which all Soldiers must complete; the Additional Duty Safety Course for all noncommissioned officers

(NCOs); the Commander's Safety Course for all master sergeants, first sergeants and commanders; and the Army Accident Avoidance Course for all personnel with an Army driver's license. Also, any Soldiers in the battalion under the age of 26 must complete the Army Traffic Safety Training Program, which is a four-hour course located on Fort Hood.

Before every long weekend, the battalion commander conducts a safety briefing for all Soldiers in the battalion. Before regular weekends, the battery/company commander conducts a safety briefing. The batteries/companies must have accountability for their personnel at the safety briefing. However, these are more safety engagements than safety briefings. Instead of the leadership simply talking to Soldiers about risks, they engage the Soldiers in a discussion about the risks related to their planned weekend activities.

Inspections

All Soldiers in the Steel Warrior battalion are required to complete a POV or POM inspection before any long weekend as part of their leave or pass packet. All new Soldiers

to the unit complete a POV inspection within 30 days of arrival and within 30 days of purchasing a new or used vehicle.

Leadership Involvement

As evident in the various policies of the 2-77 FA battalion, leadership involvement is a key factor for much of the safety program. Leadership at the lowest level is important. The junior Leaders are the ones who enforce the standard and keep track of the Soldiers in the battalion, ensuring they're participating in the safety events and completing the safety requirements. If not for the junior Leaders who take ownership of

the plan and make every effort to ensure its success, the Steel Warriors would have nothing but a plan that just looks good on paper. Instead, they have a dynamic, interactive program that keeps safety at the forefront of the battalion's mindset.

Senior Leaders must also demonstrate safety is their priority and constantly reinforce it every time they address Soldiers. Without strong support from the senior leadership, the junior NCOs and officers have nothing to stand on. Constant reinforcement and junior leadership are the keys to keeping a successful safety program **Army Safe and Army Strong.** ◀



Task Force Pegasus, 82nd Combat Aviation Brigade (CAB), executed more than 80,000 combat flight hours facing the most unforgiving terrain, weather and threats in Afghanistan. It is undoubtedly the most challenging and dangerous flight environment in the world.

Maj. Gen. David M. Rodriguez, commander of Combined Joint Task Force-82 (CJTF-82) in Afghanistan, always reminded his aviation formation that we are always one

inch or one second away from a potentially catastrophic accident. Our safety record was not flawless, but we inherited and developed some outstanding tactics, techniques and procedures that assisted us in amplifying the five-step

composite risk management (CRM) process during the execution of multifunctional combat missions during Operation Enduring Freedom.

The recent changes in Army Regulation 95-1, *Flight Regulations*, and Training Circular 1-210, *Aircrew Training Program Commander's Guide to Individual, Crew and Collective Training*, were positive initiatives to define the application of the CRM process to aviation. The science of the Army's CRM system is well known and effective in preventing

Best Practices The Art of Mitigation Aviation R

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accidents. The challenge aviation Leaders face is to successfully apply the art of this process. Identifying hazards, developing controls and making risk decisions is extremely challenging in a high operations tempo mission set in an extreme operational environment with insurgent activity. What I'm offering in this article are some of the lessons and systems learned from the 10th CAB and others during our tour of duty. I'm highlighting the key focus areas to assist commanders and Leaders at all levels in applying the esoteric art of risk mitigation to full-spectrum combat aviation operations. Many of these focus areas are well known and second nature to aviation Leaders.

Establish a Positive Aviation Command Climate

Establish the cultural norms of acceptable behavior so every pilot and crew chief does what is right when green-tab Leaders are not watching, simply because it is the right thing to do. Carefully balance the application of the Central Command waiver to ensure aviation standards remain as high as possible. Ensure every aviator knows when conditions change and risks outweigh the mission's necessity; it is then OK to postpone the mission, and the chain of command will endorse that decision. I stayed as close to the flight line and flew as often as possible. I was very deliberate and firm with how I dealt with infractions to standards. We increased our frequency of safety and standards council meetings

to bimonthly. Additionally, I gladly welcomed the U.S. Army Combat Readiness/Safety Center, Directorate of Evaluation and Standardization and Aviation Shoot Down Assessment Team for assistance when required.

Set Cockpit Conditions

Our talented, fast-tracking junior aviators can easily become fixated on mission execution and forget to fly the aircraft. I stressed the following priorities for all aviators during mission execution:

- Fly the aircraft safely.
- Avoid enemy fire.
- Accomplish the mission.

The last line of defense to prevent an accident during the execution of missions is the pilot on the controls. Set the conditions for aviators to assess conditions, make decisions



and make control inputs. Creating positive habits throughout the formation will ensure the proper actions are taken at the tip of the spear. Ensure the commander's intent is understood and certain decision authority is clearly delegated. Reading file communications and air mission commander/pilot in command certification programs are all part of the process to ensure crews have the skills and knowledge to be successful. We treated all training flights as combat flights and replaced the term "local area orientation" with "combat crew training" to ensure crew preparation was the same for every mission.

Let Aviators Make Aviation Decisions

During the mission planning process, there are many decisions that will affect the overall risk of the mission. Decisions such as planning and rehearsal time, helicopter

landing zone (HLZ) selection, route planning, crew selection and fighter management should be made by aviation Leaders. Friction with the executing ground element can result if a proper collaborative relationship is not maintained. Work with brigade aviation and ground elements to maintain a positive working relationship based on mutual respect and trust. Constant communication and education will assist the ground elements in understanding and planning missions that are well within the capabilities and limitations of our multifunctional aviation task forces.

Select Crews Deliberately

We executed a few missions with only the most senior and experienced aviators. I reviewed every mission concept and crew selection in our daily concept of operations (CONOP) brief to ensure missions were properly planned and resourced. We used a color-coded system to look at the experience level in the cockpits (see the aircrew selection slide on the *Knowledge* Web site under Online Exclusives). It's important to remember that a higher

number of flight hours does not always directly equate to experience. My senior brigade warrant officers assisted me in this process. Some might think this is micromanaging the battalion commanders, but the CONOP served as a final check for all conditions before mission execution and ensured I understood the following day's mission set. I was committed to the Families of my Soldiers and, if something unfortunate happened, I made sure I could tell them I had done everything in my power to ensure all measures were taken for safe execution.

Train for the Tough Missions

We avoided certain flight profiles simply because the risk was extremely high. Some of these tough missions were flight in zero-percent illumination, hoist missions at altitude, dust landings under nonstandard conditions and fast rope insertion/extraction system (FRIES). However, sometimes we didn't have a choice because lives were at stake during a troops-in-contact or medical evacuation mission. It was important for us to train to the most challenging mission sets even in the flight profiles



Burnin' Up the

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It was July 7, 2007, and I was sitting in a classroom at a road racing track in West Virginia. Just the date – “triple sevens” – had to be a good sign, right? I was there with other sportbike riders, sitting in on a Track Day safety briefing sponsored by the Northeast Sportbike Association (NESBA).

The goal of this non-profit, volunteer-run association is to get sportbike riders onto the tracks. There, riders can experience the performance of their machines without risking the speeding citations, dangers and increased insurance fees of illegally racing on the streets. Also, compared to the street, the track is a safe, controlled environment. No cross traffic. No intersections. No kids or animals rushing into the street from sidewalks – just smooth ribbons

of asphalt designed to allow riders to achieve maximum velocity.

During the safety brief, we were informed of the track rules – the things we could do and the things that would get us kicked off the track for the day. We went over the basics, such as how to brake on the track, which differs from braking on the street. On the track, we were told to only use the front brakes. It took me some time to get used to that because I'd been taught in the

the Track



Motorcycle Safety Foundation's (MSF) Basic RiderCourseSM (BRC) and Experienced RiderCourseSM (ERC) to use the front and rear brakes simultaneously. That training had saved my hide plenty of times on the street, but this was not the street. When racing on the track at more than 100 mph, using the rear brake can send you into a skid, which is definitely not good. We also went over the different colored flags waved by the flag men on the track, carefully learning what each flag meant.

After the 40-minute brief, we took our bikes for safety inspections and had our personal protective equipment (PPE) checked. If you don't attend the briefing and pass your motorcycle and PPE inspections, the association's trainers will not let you on the track. Safety is the name of the game and was stressed throughout the day.

Part of the inspection included eliminating distractions by taping over the motorcycle's lights and either turning down or taping over rearview mirrors. As riders, we were told we were responsible for what was going on in front of us – not what was behind. At the speeds we were going, we didn't have time to look back anyway.

When riders participate in a NESBA-sponsored track day, they're placed in groups based on their skill level. There are four levels – Intro, Beginner, Intermediate and Advanced. Riders new to the track should sign up for the Intro level. Once Intro-level riders have registered online, attended the safety briefing and passed the inspections, they are allowed two

free 15- to 20-minute sessions on the track. Last year, I took NESBA's offer for a free track day and have since joined the association.

On the track, each rider group was led by control riders (CR) wearing orange shirts so they could be easily identified. They led us through the first two laps, during which we were not allowed to pass them. On the third lap, we were allowed to open up our bikes and pass anyone we could, which we did mainly on the straights. My first session really humbled me. Watching professionals going fast on the track on TV doesn't look all that hard. However, it's a lot different when you're on the track, trying to focus on what's happening around you as you're about to enter a turn at the "speed of heat!" There's no hot-dogging – no wheelies like you see in the movies. Even at the Intro level, this was racing and nobody wanted to come in last.

The second session was my favorite. The first session had given me a chance to get used to my bike and the track. Now, I was ready to be more competitive and actually passed a few bikes on the straights. After each session, the CR gave me a one-on-one evaluation of how I did. He told me I did pretty well and suggested I could go a lot faster in the curves if I got out of my seat and leaned into the curve with my knee just above the track. When I did that, I gained a whole new appreciation for my PPE.

My time on the track was awesome – I loved every minute of it! What made it even better was that it was free. If you have a sportbike and want to get on some of the best tracks in the country to see what you and your machine are capable of, log onto NESBA's Web site at www.nesba.com. I guarantee you'll be glad you did. «

Editor's note: This is an update to the October 2007 Knowledge article on ACT-E. Changes are being implemented to improve communication and ACT-E training.

ACT-E CHANG

CHIEF WARRANT OFFICER 4 DERRICK TEVERAUGH
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Aircrew Coordination Training – Enhanced (ACT-E) is an instructor-led course that uses multimedia in a vignette-based presentation. This form of instruction allows instructors to facilitate free and open discussions, enabling aviators and crewmembers to operate more safely and effectively.

How is ACT-E Administered?

ACT-E courseware is not intended for use as a stand-alone presentation for students to “click through” to fulfill a training requirement. Instead, ACT-E is a Web-based program led by certified instructors who have completed the ACT-E train the trainer (TTT) course for annual sustainment training. Authorized ACT-E instructors are able to access the program's courseware through the U.S. Army Blackboard server at <https://learn.army.mil>. Upon completion of the program, the training is documented in the student's individual aircrew training folder in accordance with Training Circular (TC) 1-210, *Aircrew Training Program Commander's*

Guide to Individual, Crew, and Collective Training.

Accessing the Sustainment Lessons

Instructors for accessing the ACT-E courseware can be found at <https://training.rucker.army.mil>. By using your Army Knowledge Online (AKO) login and password, the Army aviation training home page welcome screen will appear. Using the aircrew coordination enhanced link at the bottom of the page will take you to instructions for registering and accessing the training support materials. Access to these training materials is controlled due to the sensitive nature of some scenarios; therefore, brigade commanders, or their designated representatives, must identify and submit

the names and other data for their approved ACT-E instructors.

Questions from the Field

Q: How do I train all the aviators I have and not exceed the yearly requirement?

A: Quarterly ACT-E training is the best solution to ensuring all aviators and crewmembers receive their annual sustainment training. Aligning this training with annual proficiency and readiness tests will afford unit trainers more flexibility in administering the program.

Q: My unit needs more trainers.

A: Currently, the only courseware available to qualify trainers is the exportable ACT-E TTT training support

package (TSP) software (ACT-E course material CD and ACT-E stand-alone compressed files), which is available on AKO via the Directorate of Evaluation and Standardization (DES) Web portal. This software can be downloaded and used by TTT-authorized individuals to qualify unit trainers to lead annual sustainment training. *Note: This software will be superseded in the near future by new courseware on the U.S. Army Blackboard Web site. The effective date will be announced on the Army Aviation Training home page, allowing trainers using the old software enough time to conclude their training.*

Q: How do I deal with aviators who do not have their initial aircrew coordination training or



2008 ALSE USERS CONFERENCE SCHEDULED

ACT-E training annotated in their closeouts or training folder?

A: In this situation, ACT-E instructors must use the exportable ACT-E TTT TSP software via AKO and the DES Web portal to initially qualify the aviator before using the sustainment courseware.

Q: I'm in a combat theater and I'm having problems logging onto the Blackboard server or do not have the bandwidth to support the video used in the courseware.

A: Brigade commanders or their designated representatives should contact the ACT-E program of instruction (POI) manager via e-mail for assistance in obtaining training materials at ruck.ACTE@conus.army.mil.

The Future of ACT-E

The current method of presentation will change from a narrated presentation with predetermined discussion points to PowerPoint-based courseware that

affords instructors the ability to move from slide to slide at a pace in line with group discussion. Appendix A of the revised edition of TC 1-210, which is due out at the beginning of 2009, will clarify and consolidate previous directives concerning ACT-E. With the maturing of Unmanned Aircraft Systems (UAS) operations, the importance of ACT-E training is readily apparent. The revised TC 1-210 will address and clarify UAS ACT-E training by giving guidance on how UAS operators will be incorporated into the ACT-E training process.

As the proponent for ACT-E, the Directorate of Training and Doctrine welcomes any input or observations of trends from the field that will help keep the courseware relevant and meet the needs of commanders and the aviators they lead. For more information, contact the ACT-E POI manager at ruck.ACTE@conus.army.mil or DSN 558-1540, COM (334) 255-1540. ◀

The 2008 Army Aviation Life Support Equipment (ALSE) Users Conference is scheduled Aug. 26-28 at the Von Braun Civic Center in Huntsville, Ala.

The latest updates in Army ALSE will be presented during morning briefings each day during the conference. During the afternoons, workshops will be conducted on important topics such as arms inspections, ALSE supply, night vision goggle updates, overwater packing and inspection, federal logistics training, oxygen systems and other essential ALSE training.

About 40 suppliers of cutting-edge ALSE technology will exhibit at this year's conference. The knowledge, expertise and solutions these exhibitors bring to the conference are a valuable resource for all ALSE personnel.

Government room rates are available for a reserved block of 50 rooms each at the Embassy Suites and Holiday Inn Select, both of which are adjacent to the civic center. The Embassy phone number is (256) 539-7373. When making reservations, use code "ALE" for the government rate. The Holiday Inn Select phone number is (256) 533-1400. When calling, use code "GAL" to make a reservation at the government rate. There is no conference fee. For more information or to register for the conference, contact Lee Suggs at (256) 955-8167 or william.suggs@peoavn.army.mil.



How to Boil a Fo

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Take an old used car and drive it month after month using the maintenance philosophy, "If it ain't broke, don't fix it." Add a strong dose of neglect by failing to check and replace components, such as radiator hoses, that were never intended to last the life of the vehicle. Simmer these ingredients under your hood during a hot summer day. When the steam rises, serve one boiled engine.

My German-made Ford Taunus was a typical "Glunker." The 9-year-old car was all I could afford as a newly married specialist stationed in Schweinfurt, Germany. However, the car did have its good points. Its battleship gray paint sometimes fooled the gate guards into thinking it was an official vehicle and they would begin to salute — that is, until they saw my rank. Still, temporarily confusing the guards gave me a certain amount of satisfaction as I drove the old Ford.

What was less satisfying was realizing my car needed repairs I couldn't afford. I was fortunate during the first year I owned it that nothing broke so badly that I couldn't jerry-rig it and keep going. However, that was all about to change.

ord

One Saturday morning, as I was stopped at a light in Schweinfurt, it looked like a steam cleaner exploded beneath my hood. White clouds boiled out of the engine compartment and even billowed out the wheel wells. I ran the short mental checklist I'd acquired as a "shade-tree" mechanic. It couldn't be a fire because the smoke wasn't black. It wasn't an exhaust leak; otherwise, I'd sound like a deuce-and-a-half. That led me to option three — a coolant leak — an observation reinforced by the temperature gauge needle rapidly climbing into the red. I turned off the ignition

and, with the help of another motorist, pushed my car into a parking lot. After waiting for a few minutes, I released the latch, lifted the hood and quickly stepped back. Two things were immediately obvious — at least one of my radiator hoses had ruptured and, given the

circulating water through the coolant system. It's possible for coolant leaking from a radiator or heater hose to dribble back along the engine and evaporate before falling to the ground.

• **Inspect your radiator hoses often.** Check for cracks or bulges and squeeze the hose

“ White **CLOUDS BOILED** out of the **ENGINE** compartment and even **BILLOWED OUT** the **WHEEL WELLS.** ”

lack of proper maintenance, it is possible to boil a Ford.

This was not the kind of breakdown where I could jerry-rig a repair and limp home. Instead, I would need to replace the radiator and heater hoses and fill the cooling system with the proper mixture of antifreeze and water. At least I was in town and knew where to get the parts I needed. Had this happened on the autobahn or during a long trip, I could have been stranded and faced with much higher repair costs.

To keep you from repeating my experience, here are some tips from the National Safety Council and from professional auto mechanics I have known.

• **Check your coolant level regularly.** On most vehicles, you can do this by checking the fluid level in the coolant recovery tank, which is normally located next to your radiator. It's important to check this often because a small leak can go unnoticed. It's also possible to have a slow leak without having a telltale puddle under your car. Some leaks only occur when the engine is running and

for firmness. A good hose will feel similar to a garden hose. Signs of a bad hose include either a spongy or hard feeling. A worn-out hose will often make a crackling sound when squeezed.

• **Check the radiator and heater hose clamps.** If they're rusty, replace them.

• **Inspect the radiator fan belt, if your car has one, and the water pump drive belt.** Check the belts for cracks, fraying and proper tension. The basic rules of thumb state you should only be able to move the belt up and down about an inch. Also, you should only be able to twist the belt sideways 90 degrees or less, and the belt(s) should not squeal when the engine is turned on. A loose or broken belt means coolant won't be pumped to your engine or your fan won't draw air through the radiator.

• **Flush and change your radiator coolant.** Use the mileage intervals listed in your vehicle's scheduled maintenance manual. Use coolants that have corrosion inhibitors to prevent rust, aluminum phosphate and other deposit buildups. ◀

Now You're Cookin'

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As we learned from the story “No Burnt Offerings” in the June 2008 *Knowledge*, there’s a lot more to a successful cookout than just throwing meat on a hot grill. And while good grilling protocol is always important when you’re standing before the flames, so, too, is following the proper food safety guidelines. Nothing will ruin your cookout more than a good, old-fashioned case of food poisoning.



okin'

While the summer weather is great for barbecues and picnics, it can also be an ideal environment for pathogens and bacteria to grow and multiply. However, by following five simple guidelines, you can help keep your food, friends and Family safe from food-borne illnesses.

Keep food out of the temperature danger zone. Most pathogens grow in temperatures between 40 and 140 F. Placing a thermometer inside your refrigerator is a good way to ensure the proper holding temperature of your food. A good rule of thumb is to keep cold foods cold and hot foods hot, and don't let food sit out more than two hours at room temperature.

Thoroughly cook all foods. Cooking foods to a safe internal temperature will kill most pathogens.

It's a good idea to use a food thermometer to ensure the food reaches that proper temperature because looks can be deceiving.

Avoid cross-contaminating foods. Bacteria can spread through cross-contamination. When handling raw meat, poultry, seafood and eggs, keep these foods and their juices away from ready-to-eat foods. Always start with a clean preparation area and wash hands, cutting boards, dishes, countertops and utensils with hot soapy water. In addition, never place cooked food on a plate that previously held raw meat, poultry, seafood or eggs.

Practice good personal hygiene to prevent the spread of food-borne illnesses. Hands should be washed before and after handling food. Use warm water with soap for at least 20 seconds and then dry the hands with disposable towels. Other good food preparation practices include wearing clean clothes, using hair restraints and removing jewelry.

Refrigerate leftovers immediately. Refrigerating foods quickly will slow the growth of harmful bacteria. However, do not overstuff the refrigerator. The cold air must circulate to help keep food safe. When you're ready for the leftovers, make sure all soups, sauces and

Follow the guidelines below to ensure your food has reached an optimal internal temperature:

- Beef, veal and lamb steaks and roasts – 145 F for medium rare, 160 F for medium and 170 F for well-done
- Ground pork and ground beef – 160 F
- Poultry – At least 165 F
- Fin fish – 145 F or until the flesh is opaque and separates easily with a fork
- Shrimp, lobster and crabs – Meat should be pearly and opaque.
- Clams, oysters and mussels – Until the shells are open

gravies are reheated to a boil. Other leftovers should be warmed to 165 F.

Remember, food safety is a proactive measure. When in doubt, call your local U.S. Army food inspector. Food inspectors are part of the Veterinary Corps and are located at almost all Department of Defense installations. For more information about the U.S. Army Veterinary Services or food safety, visit www.veterinaryservice.army.mil and look for the food safety links.◀

FISCAL 2007: AN UPDATE

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Editor's note: The following article is a review of Army accidents for fiscal 2007. This article reflects accident reports that were not available for the end-of-year stories published in the January 2008 issue of Knowledge.

Aviation

The chart to the right provides a comparison of fiscal 2007 and 2006 aviation Class A through C accident rates (accidents per 100,000 hours flown):

- Class A through C accident rates increased for the top four modernized aircraft series during fiscal 2007.

- The AH-64-series aircraft had the highest increase in Class A through C accident rates.

ACCIDENT RATES

Per 100,000 Flying Hours

ACFT SERIES	CLASS A		CLASS B		CLASS C	
	FY06	FY07	FY06	FY07	FY06	FY07
AH-64A/D	2.62	4.99	0.52	1.87	4.20	4.99
C/MH-47	2.73	4.58	0.91	0.00	8.19	10.30
OH-58D	1.47	2.46	0.00	0.00	0.98	11.70
U/MH-60 A/L	1.68	1.98	1.44	0.85	4.09	6.80

as of April 3, 2008

The following shows the percentage of change between fiscal 2007 and 2006 aviation Class A through C accidents:

- Excepting the H-60 series, the other top four modernized aircraft showed a significant increase in accidents.
- The AH-64-series aircraft had the largest increase (60 percent) of Class A accidents compared to fiscal 2006.
- Unmanned aircraft systems experienced a 25-percent increase in Class A accidents.
- All other aircraft experienced a 300-percent change in Class A accidents. The accident count was one for fiscal 2006 and four for fiscal 2007. (Low numbers for computing percentage increase.)

Although the Army had slightly more “flight” accidents during



RECENT CHANGE

FY2006/FY2007

	CLASS A			CLASS B			CLASS C			TOTAL		
AIRCRAFT SERIES	FY06	FY07	% CHANGE	FY06	FY07	% CHANGE	FY06	FY07	% CHANGE	FY06	FY07	% CHANGE
AH-64A/D	5	8	60%	1	3	200%	10	10	0%	16	21	31%
C/MH-47	3	4	33%	1	1	0%	10	11	10%	14	16	14%
OH-58D	4	5	25%	5	0	-100%	20	22	10%	29	27	-7%
U/MH-60 A/L	10	8	-20%	9	4	-56%	22	27	23%	41	39	-5%
UAV	4	5	25%	44	20	-55%	78	50	-36%	126	75	-40%
OTHER AIRCRAFT	1	4	300%	3	4	33%	6	12	100%	10	20	100%
TOTAL	27	34	26%	63	32	-49%	146	132	-10%	236	198	-16%

fiscal 2007 compared to fiscal 2006, flying hours also increased. Applying rate formulas shows us we had a significant increase in accidents per flying hour during fiscal 2007. The H-60-series aircraft had the most flying hours of any Army rotary-wing aircraft (47 percent of total rotary-wing hours) with only a slight rate increase for Class A accidents. During fiscal 2007, the top three mishap events for Class A through C accidents were engine overspeed/overtemp, hard landing and object strike.

Ground

During fiscal 2007, the Army experienced 2,220 Class A through C ground accidents, costing \$133.2 million. There were 230 Class A ground accidents, resulting in 212 Army military fatalities. As can be seen in the pie chart on page 30, 62 percent of the Class A through C Army ground accidents involved personnel injuries (PI); 21 percent were privately owned vehicle (POV) accidents; 12 percent were Army Motor Vehicle (AMV) accidents;

as of April 3, 2008

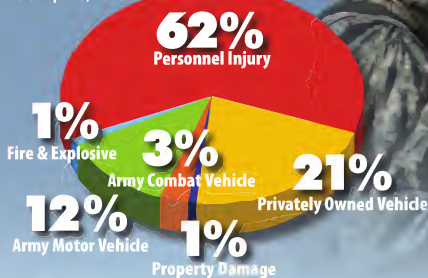
and 3 percent were Army Combat Vehicle (ACV) accidents.

The picture changes when looking at Army military fatalities. POV accidents accounted for 52 percent of the fatalities; PI accidents accounted for 25 percent; AMV accidents accounted for 17 percent; and ACV accidents account for 5 percent. POV accidents will be discussed in further detail on page 31.

FISCAL 2007 CLASS A-C

Army Ground Accidents

as of April 3, 2008



Personnel Injury

While PI Class A through C accidents in fiscal 2007 were down 55 from fiscal 2006, Class A accidents increased by 12. Of the fiscal 2007 accidents, 39 percent occurred while participating in Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF).

On-duty accidents accounted for 75 percent of the Class A through C PI accidents, resulting in 18 Army military fatalities and 1,022 non-fatal injuries. Fiscal 2007 saw 38 fewer Class A through C accidents and two fewer Class A accidents. The most frequent PI activities were physical training (e.g., running/jogging, confidence course), 18 percent; combat soldiering (e.g., hand-to-hand combat, patrolling/reconnoitering/scouting, infiltrating/assaulting/retreating), 16 percent; parachuting, 13 percent; engaging in "human movement" (e.g., walking, climbing/mounting/dismounting), 12 percent; and maintenance/repair/servicing activities, 11 percent.

Off-duty accidents accounted for 25 percent of the Class A through C PI accidents, resulting

in 34 Army military fatalities and 306 non-fatal injuries. While the number of Class A through C accidents dropped by 17 from fiscal 2006, Class A accidents increased by 14. The most frequently reported accident activities were sports (e.g., basketball, football, softball, bicycling, water sports), 41 percent; and engaging in "human movement" (e.g., walking, climbing/mounting/dismounting, running), 20 percent.

Army Motor Vehicle

AMVs accounted for 12 percent of Class A through C accidents and 13 percent of Class A accidents during fiscal 2007, resulting in 37 Army military fatalities and 190 non-fatal injuries. Compared to fiscal 2006, there were 24 fewer Class A through C accidents and 10 fewer Class A accidents.

Most (72 percent) of these accidents involved tactical vehicles and accounted for 18 Army military fatalities and 87 non-fatal injuries. The HMMWV was the most common accident vehicle, with the M1114 accounting for 62 of 115 HMMWV accidents. Government

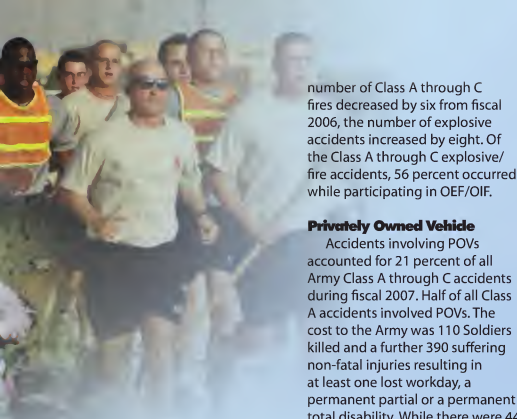
sedans/station wagons were the most frequent commercial vehicles involved in AMV accidents.

Of the fiscal 2007 Class A through C AMV accidents, 61 percent occurred while participating in OIF/OEF, while 68 percent of Class A AMV accidents occurred while participating in OIF/OEF.

Army Combat Vehicle

ACV accidents accounted for 3 percent of the Class A through C accidents and 9 percent of the Class A accidents in fiscal 2007. There was an increase of 21 Class A through C accidents and 10 Class A accidents compared to fiscal 2006. During fiscal 2007, 11 Soldiers died and 36 others suffered non-fatal injuries from ACV accidents.

The most frequent ACV accident vehicles during fiscal 2007 were Bradley Fighting



Vehicles, M1 tanks, special-purpose armor vehicles and LAV Stryker-series vehicles. Of the fiscal 2007 Class A through C accidents, 48 occurred while participating in OIF/OEF, while 16 Class A accidents occurred while participating in OIF/OEF.

Explosive and Fire Accidents

Explosive and fire accidents accounted for 1 percent of the Class A through C accidents and 2 percent of the Class A accidents during fiscal 2007. While the

number of Class A through C fires decreased by six from fiscal 2006, the number of explosive accidents increased by eight. Of the Class A through C explosive/fire accidents, 56 percent occurred while participating in OEF/OIF.

Privately Owned Vehicle

Accidents involving POVs accounted for 21 percent of all Army Class A through C accidents during fiscal 2007. Half of all Class A accidents involved POVs. The cost to the Army was 110 Soldiers killed and a further 390 suffering non-fatal injuries resulting in at least one lost workday, a permanent partial or a permanent total disability. While there were 44 more Class A through C accidents than during fiscal 2006, there were 14 fewer Class A accidents.

Motorcycle riders accounted for 45 percent of the Class A through C POV accidents, with the number of accidents rising from 183 during fiscal 2006 to 210 during fiscal 2007. These accidents accounted for 38 Army military fatalities and 174 non-fatal injuries.

Sedan accidents increased by one for a total of 146, accounting for 31 percent of the Class A through C POV accidents.

These accidents resulted in 39 Army military fatalities and 128 non-fatal injuries.

The remaining 24 percent of the Class A through C POV accidents involved Jeeps, sport utility vehicles, pickups, all-terrain vehicles, vans, bicycles and other vehicles. These accidents increased from 95 in fiscal 2006 to 111 in fiscal 2007. These accidents accounted for 33 Army military fatalities and 88 non-fatal injuries.

Conclusion

Overall, PI accidents accounted for the majority of Army injuries. As with previous years, POV accidents accounted for the majority of Army fatalities. Because the Army continues to lose Soldiers and equipment to needless accidents, it's critical all Army personnel strive to prevent these losses. Check out the USACRC's Web site at <https://csrc.army.mil> for easy-to-access-and-use tools to arm yourself with the knowledge to prevent future accidental losses. ◀

Editor's Note: These statistics are current from the USACRC database as of April 3, 2008. Next month, Knowledge will publish the 2008 midyear review.



LOST

AVIATION

CH-47



CLASS C D Model

■ The escape hatch separated during flight at 1,000 feet mean sea level (MSL) and 120 knots indicated airspeed (KIAS).

OH-58



CLASS C C Model

■ The aircraft suffered tail boom damage (buckling) while conducting a low-level autorotation.

CLASS A D(R) Model

■ The aircraft contacted trees

during flight, resulting in an uncommanded spin, and crashed.

➤ **ARE YOU TOTALLY FOCUSED ON FLYING AND SURVIVING?**

UH-72



CLASS A A Model

■ During a simulated engine failure training maneuver, the tail rotor made contact with a ground obstacle and touched down hard.

C-12



CLASS C U Model

■ The aircraft suffered a bird strike to the right wing during flight.

UAS

MQ-5B



CLASS B

■ Post-flight inspection revealed a fuel leak and damage to the right landing gear and fuselage empennage.

RQ-1L



CLASS A

■ The UAS was in cruise flight at 14,000 feet MSL when controllers lost communication link. The system was later recovered.

RQ-7B



CLASS B

■ The UAS experienced mechanical problems (flap servo fail indication) during flight and sustained damage during touchdown. The system was recovered.

CLASS C

■ The UAS developed engine RPM fluctuations during flight, followed by engine failure. The parachute deployed and the system was recovered.

GROUND

AMV



CLASS A

■ A Soldier was paralyzed from the waist down when he was ejected from an M1151 that overturned and rolled numerous times. The driver of the vehicle, who was also ejected, was not injured. Seat belt use was not reported.

■ A Soldier was killed when his M1114 overturned when the driver attempted to avoid craters in the road during a convoy movement. The crew initiated rollover procedures, but the gunner suffered fatal injuries.

Personnel Injury



CLASS A

■ A Soldier suffered fatal injuries when an M1114 HMMWV shifted off two "bottle jacks" and fell on him. The Soldier was performing maintenance on the front brake calipers of the vehicle.

CLASS B

■ A Soldier lost his left index finger to the first joint when it was caught between the tow bar and track pad while performing maintenance on an M88.

DRIVING

POV



CLASS A

■ A Soldier was driving his privately owned vehicle (POV) in the fast lane when he veered left toward the median, lost control and struck an overpass embankment. The Soldier was critically injured and air evacuated to a medical facility, where he later died. He had been briefed on travel safety by his supervisor before the trip, but had not completed a risk assessment. He was wearing a seat belt and his air bags deployed.

■ A Soldier was driving his POV at a high rate of speed with another Soldier riding as a passenger when he lost control, ran off the road and struck a tree. The driver was fatally injured. The passenger was evacuated to a medical facility, where he was listed in stable condition. Neither Soldier was wearing a seat belt.

DO YOUR SOLDIERS UNDERSTAND THAT NOT WEARING SEAT BELTS AND SPEEDING IS A RECIPE FOR TRAGEDY?

■ A Soldier was driving his POV when he lost control, crossed the center line and crashed into a cement-mixing truck. The Soldier, who was wearing his seat belt, was fatally injured.

ARMY AIRCRAFT LOSSES

Fiscal 2002 to Present
through May 27, 2008



Hostile/
Non-hostile

AH-64A/D	11/51
U/MH-60A/L	8/28
C/MH-47	8/16
OH-58D	11/28

TOTAL 38/123

ARMY GROUND LOSSES

Fiscal 2008
through April 6, 2008



Class A/Facilities

AMV	16/12
ACV	5/3
PERSONNEL INJURY <small>includes weapons handling accidents</small>	26/22
FIRE/ EXPLOSION	3/3
PROPERTY DAMAGE	1/0

TOTAL 51/40



■ A Soldier in transition leave status was driving her POV when it overturned. The Soldier was pronounced dead at the scene.

POM



CLASS A

■ A Soldier was operating his motorcycle at a high rate of speed when he ran a red light, collided with a minivan and suffered fatal injuries. The Soldier was wearing a helmet, was licensed and had attended Army-approved Motorcycle Safety Foundation (MSF) training three months before the accident.

■ A Soldier operating his motorcycle at a high rate of speed lost control and was thrown into a pole, where he died upon impact. The Soldier was wearing Army-required personal protective equipment (PPE), was licensed and had attended Army-approved MSF training.

■ A Soldier was operating another Soldier's motorcycle in a parking lot when he drove onto the roadway and struck a guardrail. The Soldier was not wearing a helmet or PPE, was not licensed and had not taken MSF training. He was taken to a medical center, where he later died.

POV DRIVING LOSSES

through June 4, 2008

Class A accidents/Soldiers killed

CARS	33/33
SUV/JEeps	7/8
TRUCKS	8/6
MOTORCYCLES	30/29
OTHER*	3/3

*Includes: vans and ATVs

79

TOTAL DEATHS

Fiscal 2007: **69** 3-year average: **80**



WEAR YOUR SEAT BELT

■ A Soldier was driving his POV at a high rate of speed with another Soldier riding as a passenger when he lost control, ran off the road and struck a tree. The driver was fatally injured. The passenger was evacuated to a medical facility, where he was listed in stable condition. Neither Soldier was wearing a seat belt.



Post-Deployment

Family engagement kit

Post-Deployment Family

Safe is Family Strong!



→ Motorcycle

Good News: They wear their seat belt and follow the rules of the road.

Bad News: Motorcycles are the most dangerous mode of transport for Soldiers.

Family Engagement Kit: To help you stay safe, we've included a checklist of things to do before you head out on the road.

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We, as leaders, know that direct engagement with our Soldiers makes a difference in their safety. You and your family, better than anyone, know your Soldier—what they like and dislike, how they think and how their decision process is carried out. Families make a direct impact on how a Soldier reacts in any given situation.

Therefore, I am asking you, the family, to help your Army take better care of your loved one.

With your direct help and support, we can better protect our nation's most precious assets—our Family members.

Army Safe is Family Strong!



U.S. ARMY

William H. Forrester

William H. Forrester
Brigadier General, USA
Commanding

You and your Family, better than anyone, know your Soldier.

Get the tools for Family members to take an active role in implementing safety practices to protect their loved ones returning home from deployments. Log on today and get your Family Engagement Kit.

<https://cra.army.mil/familyengagement>

ARMY SAFE IS ARMY STRONG



U.S. ARMY

ARMY STRONG.



U.S. ARMY COMBAT READINESS/SAFETY CENTER

<https://cra.army.mil>

safety tips

Most often, food poisoning occurs because food is incorrectly handled, improperly cooked or inadequately stored. The following steps can help reduce chances of getting food poisoning:

- Wash your hands, utensils and food surfaces often.
- Keep raw foods separate from ready-to-eat foods.
- Cook food to the recommended temperature.
- Defrost food safely in the refrigerator, microwave or cold water.
- Use caution when serving food:
 - Throw out leftovers that have been out for more than two hours.
 - Use a tray of ice for cold foods that must stay out longer than two hours.
 - Use warming trays for hot foods that must stay out longer than two hours.

When in doubt, throw it out.

safety always in season

The bottom line—keep hot foods hot, keep cold foods cold.



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ARMY STRONG.™



U.S. ARMY COMBAT READINESS/SAFETY CENTER

<https://crc.army.mil>

ARMY SAFE
IS ARMY STRONG

101
CRITICAL
DAYS OF SUMMER
26 May - 1 Sept 2008

Heat savvy can save lives



Avoid becoming a heat casualty this summer; protect yourself and your Family.

Drink plenty of fluids

Increase fluid intake - regardless of activity level. During hot weather, individuals need to drink more liquid than their thirst indicates.

Wear appropriate clothing and sunscreen

Choose lightweight, light-colored, loose-fitting clothing. In the sun, a wide-brimmed hat will provide shade and keep the head cool.

Adjust to the environment

Sudden changes in temperature are stressful to the body. Individuals develop a greater tolerance by limiting physical activity until acclimated to the heat.

Replace salt and minerals

Heavy sweating removes salt and minerals from the body. These are necessary for a body and must be replaced.

Monitor those at risk

Any health condition that causes dehydration makes the body more susceptible to heat sickness. Avoid over-exertion and get advice about medication interaction.

Schedule activities carefully and using common sense

Try to plan activities either before noon or in the evening. While outdoors, rest frequently in a shaded area. Resting periodically will give a body's thermostat a chance to recover. The most efficient way to beat the heat is to stay in a cooled area.



U.S. ARMY

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